



Europäisches Patentamt
European Patent Office
Office européen des brevets



Publication number: **0 412 942 A1**

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 90830253.2

(51) Int. Cl.⁵: B60R 22/32

(22) Date of filing: 05.06.90

(30) Priority: 10.08.89 IT 3593389 U

(43) Date of publication of application:
13.02.91 Bulletin 91/07

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR LI LU NL SE

(71) Applicant: Barbuti, Vittorio Romano
Via Eugenio Donadoni 1
I-56100 Pisa(IT)

(72) Inventor: Barbuti, Vittorio Romano
Via Eugenio Donadoni 1
I-56100 Pisa(IT)

(74) Representative: de Simone, Domenico et al
Ing. Barzandè & Zanardo Roma S.p.A. Via
Piemonte 26
I-00187 Roma(IT)

(54) Quick-release device for safety belts for motorvehicles.

(57) A release device for safety belts provided on the latching device's portion connected to the seatbelt (2), in which device a first and a second annular loop (9) are provided on the top of the said portion of the latching device, a recessed portion (10) is provided between said first and said second annular loops, and a to slip-removable pin (11) is provided between said first and said second annular loop; in which device said recessed portion, provided between said first and said second annular loop, and said slip-removable pin define a hollow for the passage of the safety belt, and said first and said second annular loops are provided at their interior with clamping means.

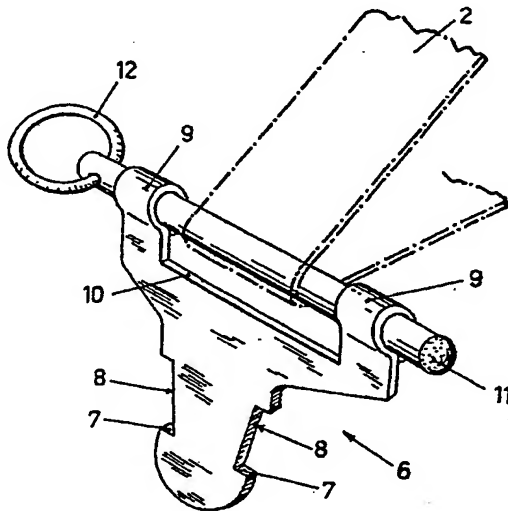


FIG. 2

EP 0 412 942 A1

QUICK-RELEASE DEVICE FOR SAFETY BELTS FOR MOTORVEHICLES

The present invention relates to a quick-release device for safety belts for motorvehicles.

More particularly, the present invention relates to a hand-released safety device fitted to the end portion of the seatbelt, which device allows the latter to be released also in the case of lock-in of the latching device, due to impacts, accidents or malfunction of the same.

In fact, as is well-known, safety belts which at present are assembled in motorvehicles are equipped with a latching system consisting of two members: the first member possibly sliding along the seatbelt itself, having a loop and a differently shaped protruding portion intended for being engaged with the corresponding fastening device assembled in the part of the passenger compartment that is comprised between the two front seats, and that is generally supported by a post member so that, as a result, it is at a height consistent with the position of the third fastening point provided on the inner wall of the motorvehicle, on the same vertical of the first fastening point, but at a lower position, so that as a result the seatbelt portion tightened between the latter and the latching system is tightened across the motorist's pelvis.

Fastening devices at present employed have in most cases a spring latching system which can be released by exerting a light pressure on a push-button so constructed that, by pressing the spring with the extremity connected to the seatbelt, the two side portions which are intended for being engaged with the proper housings provided on the extremity of the complementary portion are moved away from each other, so determining, when the compression action of the spring stops, the reciprocal latching of the two portions.

It often happens that such devices, due to a prolonged use, tamperings, impacts, accidents, remain locked in the latched position, so creating a lot of troubles for the motorist, who is forced to make difficult and not always easy movements for freeing himself from his assumed position.

This fact turns out to be even more inconvenient in case that the latching system malfunctions as a consequence of road accidents or in all cases when the possibility of going quickly out of the motorvehicle itself is of the essence.

It is therefore apparent the need for having at disposal a quick-release device for the seatbelt, of a manually-operated type, in case of lock-in of the spring system.

In order to fulfill this need, it is proposed according to the present invention to realize a quick-release device provided on the portion of the fastening member connected to the seatbelt, consist-

ing of a slip-removable pin with the function of a loop for the seatbelt itself, endowed with a clamping member and provided with a handgrip ring for exerting the slipping action, so as to be easily released by the motorist in case of necessity.

It is therefore a specific object of the present invention a release device for safety belts provided on the latching element's portion which is connected to the seatbelt, in which a first and a second ring loop are provided on the top portion of said portion of the latching member, and in which a recessed portion is provided between said first and said second annular loop, and in which a slip-removable pin is provided between said first and said second annular loop, and in which said recessed portion provided between said first and said second annular loop defines with said slip-removable pin a hollow for the passage of the safety belt and in which clamping means are provided in said first and in said second loop to prevent the pin from undesirably slipping out.

Said clamping means provided in said ring loops are made up of rubber in a preferred embodiment of the present invention.

In addition, again according to the present invention, a ring member is provided at the extremity of said slip-removable pin, to make the removal from the annular passages easier in case of necessity.

The present invention will be now described in an illustrative and not limiting way, with reference to the enclosed drawings in which:

Figure 1 shows a schematic view of a sitting motorist, with a safety belt endowed with the quick-release device according to the present invention in a fastened position;

Figure 2 shows a perspective view of the quick-release device according to the present invention fitted to a first embodiment of the latching element's portion connected to the seatbelt;

Figure 3 shows a perspective view of the quick-release device according to the present invention assembled on a second embodiment of the latching element's portion connected to the seatbelt, in a fastened position;

Figure 5 shows a perspective view of a quick-release device according to the present invention, assembled on a third embodiment of the latching element's portion connected to the seatbelt.

As can be observed from figure 1, the motorist 1 is tied by the seatbelt 2 which has three fastening points:

point 3 and point 4 fixed on the interior portion of the passenger compartment, and the fastening

point 5 provided between the two front seats.

As is well-known, one of the two portions of the fastening members, and more precisely that endowed with the spring system, of the latching elements and of the release push-button is fixed in position 5, while its complementary portion 6 slips along the seatbelt 2.

As is more apparent from figures 2, 3 and 4 that portion 6 comprises an end portion, variously shaped and having lugs 7 and recesses 8 for engaging the fastening elements provided in the fixed portion and a top portion comprising two annular loops 9 and a recessed portion 10.

Between said annular loops 9 a slip-removable pin 11 is provided, endowed with a handgrip ring 12 which defines, with the hollow 10, a zone intended to the passage of seatbelt 2.

Each of the two rings 9, in addition, has at its interior portion an element preferably made up of rubber to prevent the pin 11 from being inadvertently slipped out.

Alternative embodiments of the end portion of the element 6 are shown in figures 3 and 4.

In particular, in Figure 3 the end portion consists of an orientable plate 13, which can be fixed with screws 14 to portion 6 at various angles according to the position of the complementary fastening position.

Similarly, in Figure 4 a latching element is shown, sliding on the seatbelt correspondingly to pin 11, in which the end portion is at a different angle with respect to the plane of the two loops 9, in order to make the engagement with the fixed latching element easier.

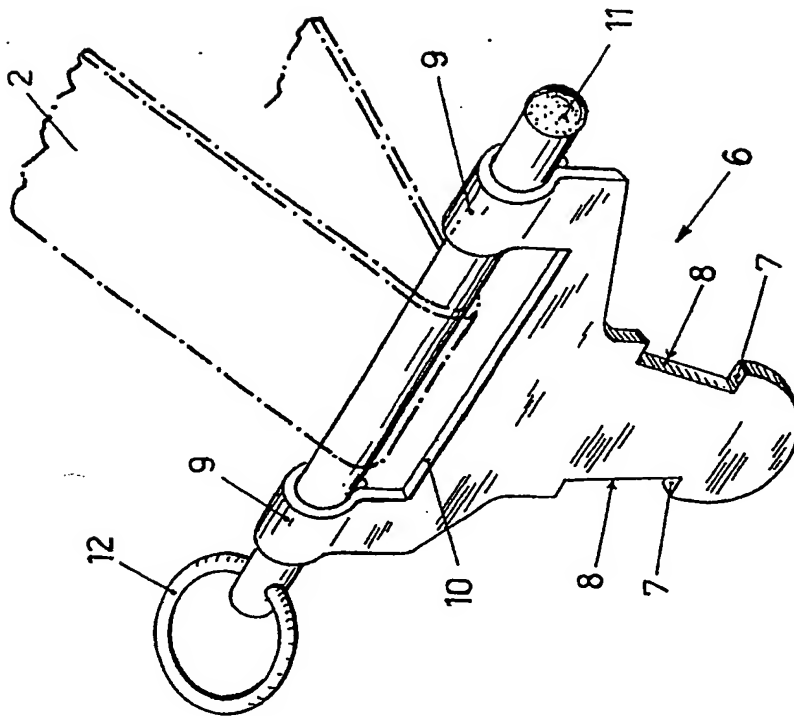
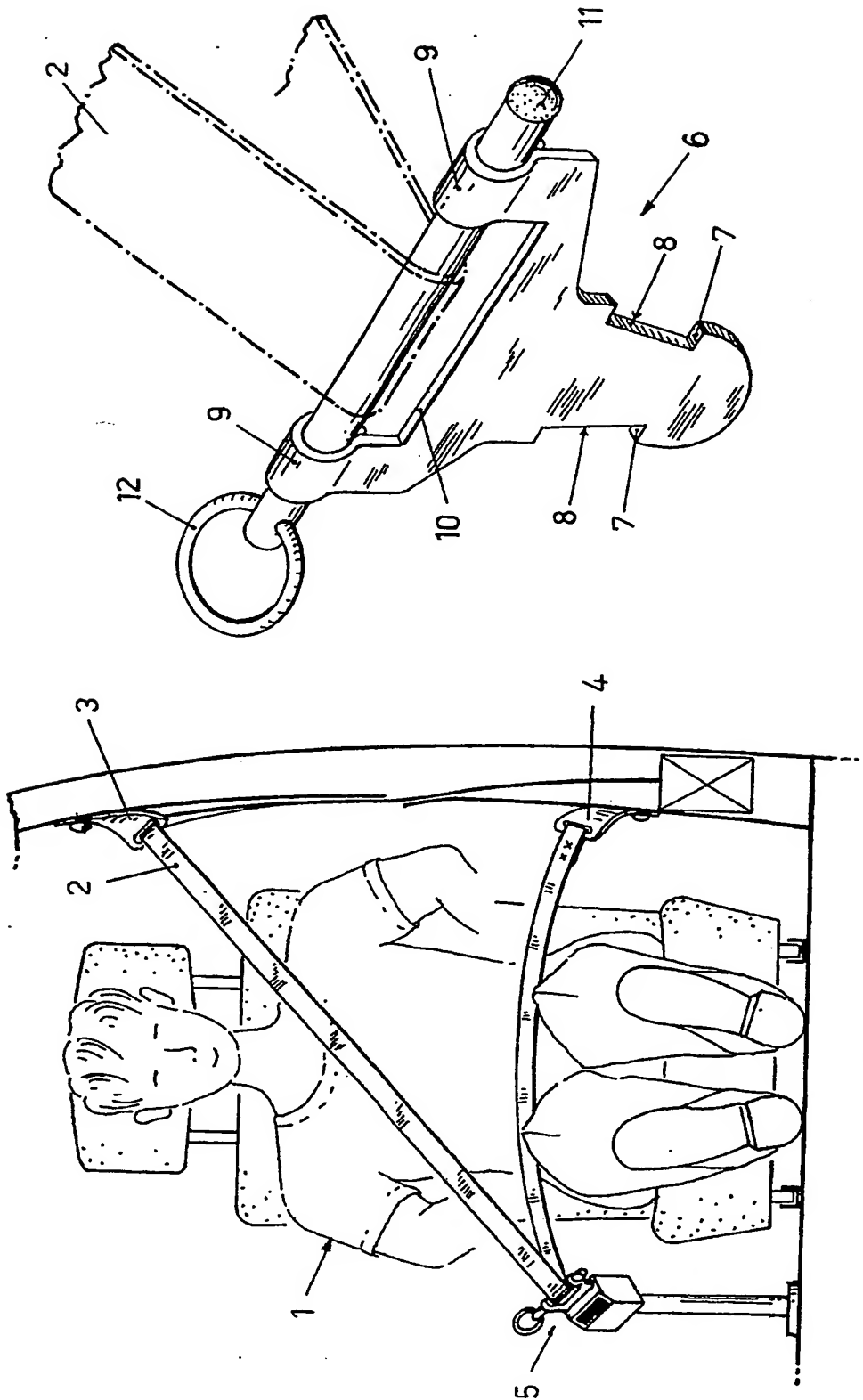
In this case also the pin 11 can be slipped in the direction of the arrow so as to free the seatbelt 2 in case of lock-in of portion 6 in the fixed device 5.

provided at the interior of said annular loops are made of rubber.

3. A release device for safety belts according to claim 1, characterized in that said slip-removable pin has ring means at its end for exerting a pulling action.

Claims

1. A release device for safety belts provided on the latching device's portion connected to the seatbelt, said device being characterized in that a first and a second annular loop are provided on the top of the said portion of the latching device, in that a recessed portion is provided between said first and said second annular loops; in that a slip-removable pin is provided to between said first and said second annular loop, in that said recessed portion provided between said first and said second annular loop and said slip-removable pin define a hollow for the passage of the safety belt; in that said first and said second annular loops are provided at their interior with clamping means.
2. A release device for safety belts according to claim 1, characterized in that said clamping means



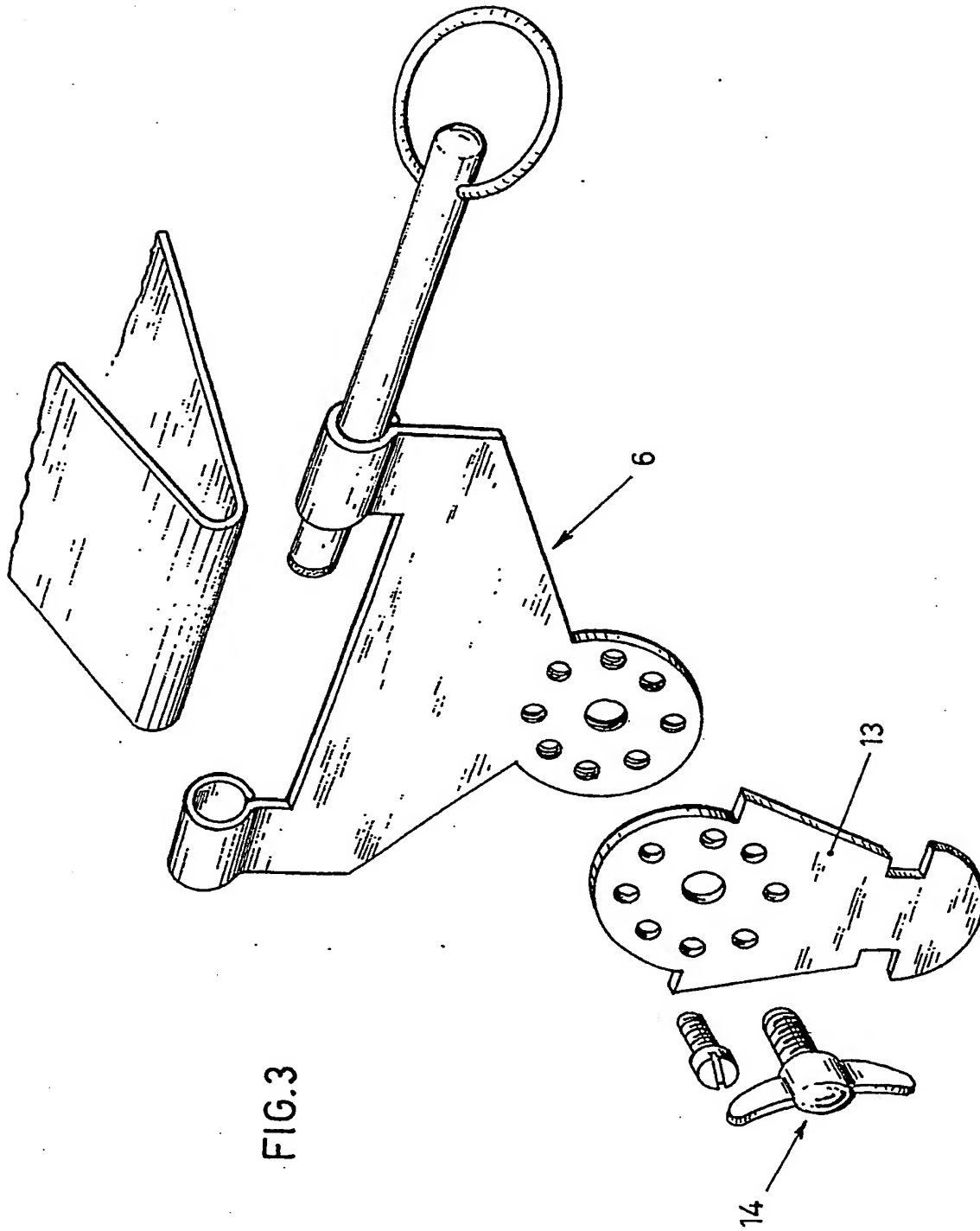


FIG.3

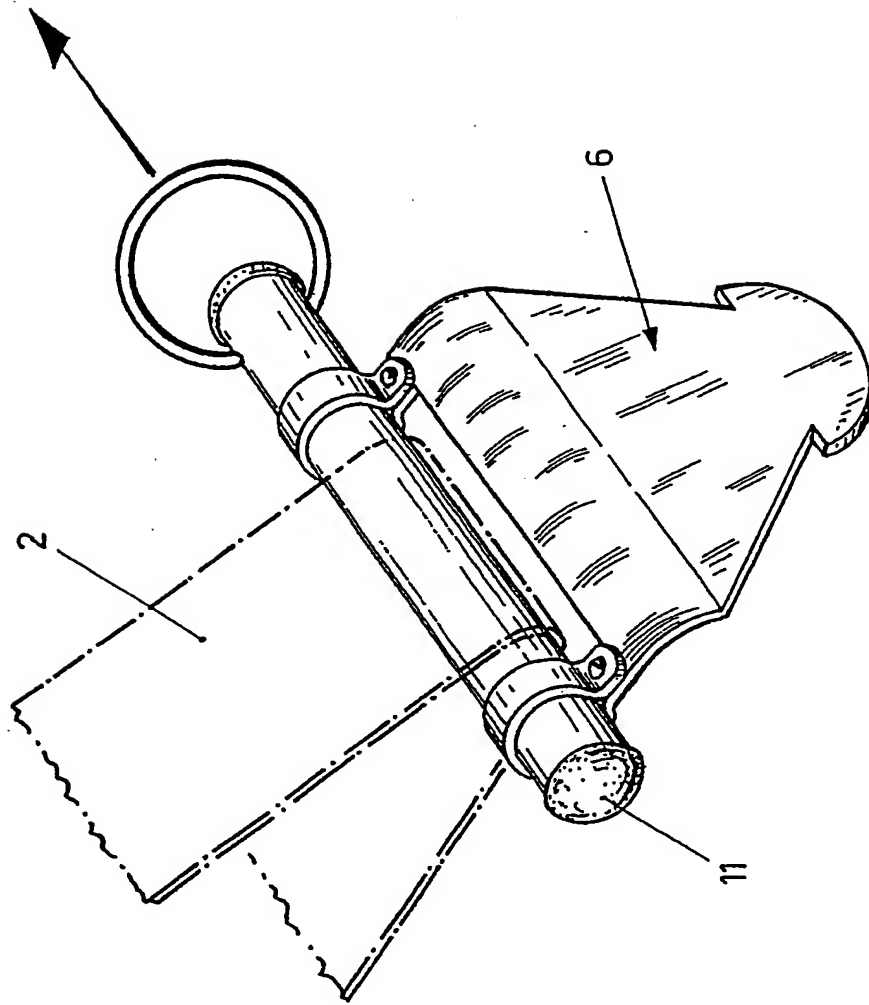


FIG. 4



European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 83 0253

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	FR-A-2 507 864 (FERRANDON ET CHEVALIER) * figures 1, 7-9 ** page 1, lines 1 - 6 @ page 2, lines 17 - 26 @ page 4, lines 10 - 27 * - - - -	1	B 60 R 22/32
A	CH-A-5 960 13 (LORENZO GIOVAGNONI) * figure 1 ** column 2, line 26 - column 49 * - - - -	1,3	
A	DE-A-2 903 210 (SCHONDORFF BERNHARD) * figures 1, 11-12 ** page 5, lines 28 - 31 ** page 12, line 29 - page 13, line 4 * - - - - -	1,3	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B 60 R
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		25 October 90	D'SYLVA C.H.A.
<div>CATEGORY OF CITED DOCUMENTS</div> <div>X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention</div> <div>E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding document</div>			